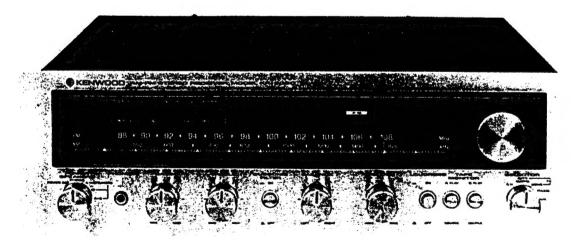


SERVICE MANUAL

KR-5030 (KR-5330)

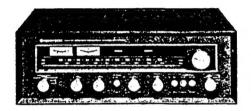


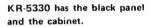
AM-FM STEREO RECEIVER

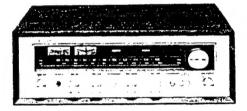


CONTENTS

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INTERNAL VIEW	4
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The unit for PX has the cabinet.

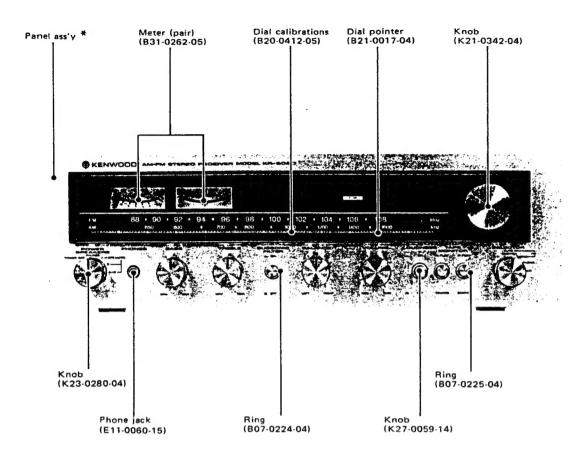
Note

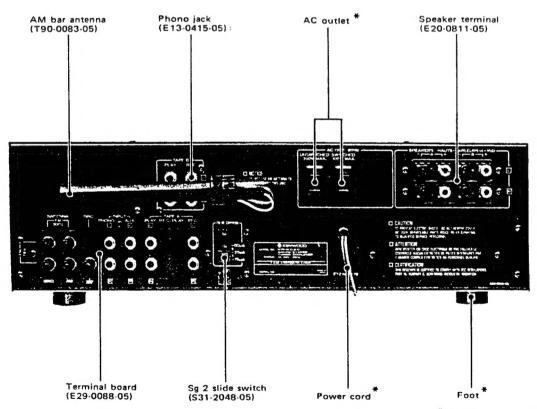
The products are subject to modification in components and circuits in different countries and regions. This is because each product must be used under the best condition. This manual provides information of modification based on the standard in the U.S., for the convenience of ordering associated components and parts.

U.S.A	K
U.S.A. Canada	P
PX	U
Australia	X
Europe	W
England	T
Scandinavia	L
South Africa	S
Other Areas	M
Audio Club	KR-533



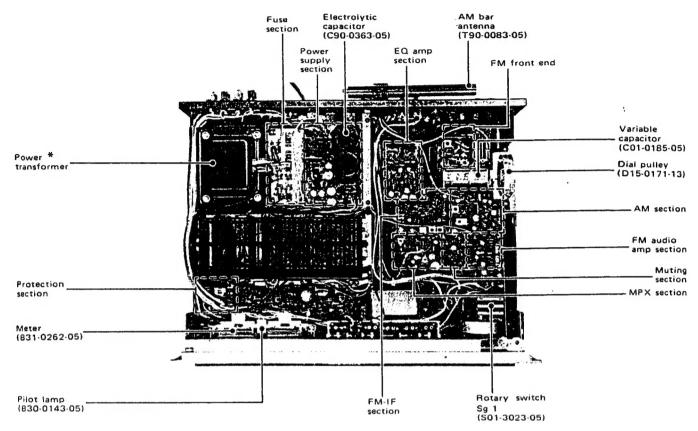
EXTERNAL VIEW







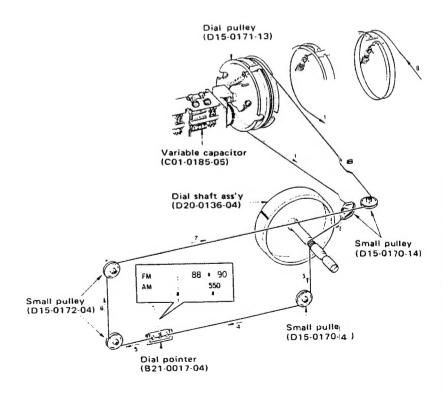
INTERNAL VIEW/DIAL CORD STRINGING



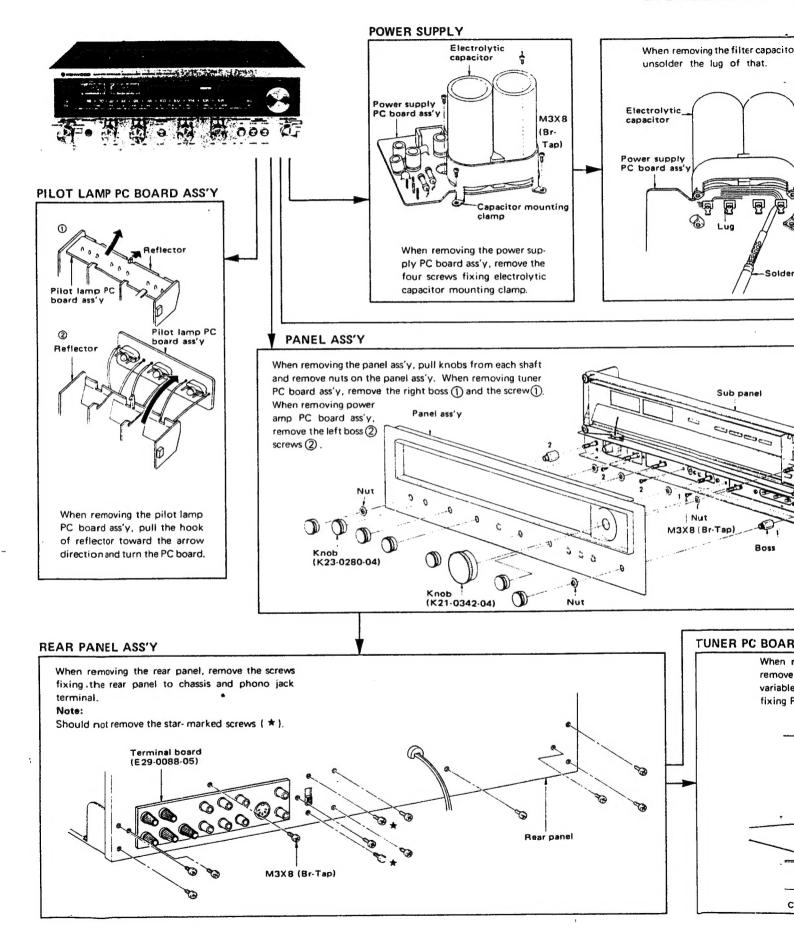
* Refer to Destinitions' Parts List.

DIAL CORD STRINGING

- 1. Fully close the variable capacitor.
- Fix the dial pulley to the shaft of the variable capacitor using 2 screws as shown.
- 3. Tie the dial cord to the dial spring leaving a 10 cm length part of it.
- Hook the dial spring on the boss, and wind it half turn counterclockwise around the dial pulley.
- 5. Dress the dial cord in the direction of "1" to "2".
- Wind the dial cord 2 turns around the dial shaft starting from its upper side, then dress it in the direction of "3" to "8".
- 7. Tie the end of it tightly with remaining a 10 cm dial cord.
- 8. Remove the dial spring from the boss.
- Mount the dial pointer as shown in the illustration.



DISASSEMBLY F





SSEMBLY FOR REPAIR

Soldering iron

loving the filter capacitor,

Sub panel

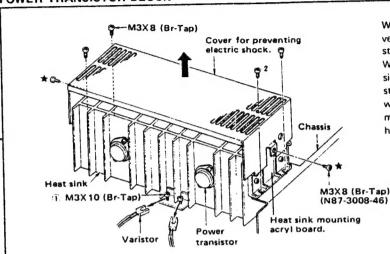
(B (Br-Tap)

the lug of that.

Caution:

When repairing or checking the internal parts, should not touch the heat sink by reason that it has the dual power voltage during operation of amplifier.

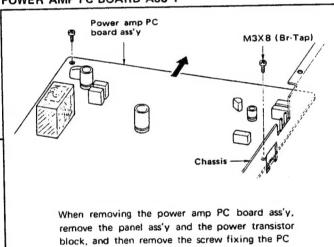
POWER TRANSISTOR BLOCK



When removing the cover for preventing electric shock, remove the star-marked screws (*) in the figure. When removing the power transistor block, first, remove the varistor from varistor mounting hardware on the heat sink, next, remove the four screws fixing the heat sink mounting acryl board.

POWER AMP PC BOARD ASS'Y

board ass'y.

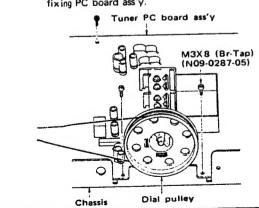


METER M3X8 (Br-Tap) мзхв (Br-Tap) (B31-0262-05)

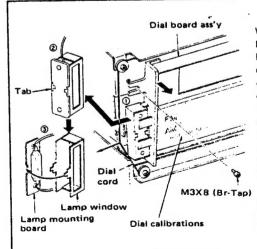
> When repairing the meter, should remove the cover on the heat sink. The meter ass'y is mounted by 2 screws.

TUNER PC BOARD ASS'Y

When removing the tuner PC board ass'y, remove the dial pulley from the shaft of variable capacitor and screw and push rivet fixing PC board ass'y.



DIAL CALIBRATIONS' PILOT LAMP



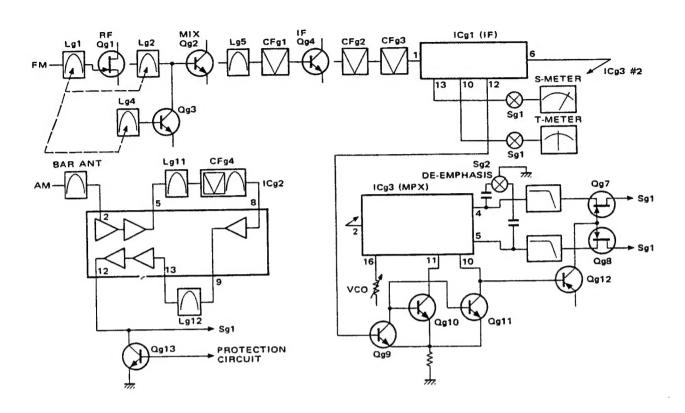
When removing the pilot lamp for dal calibrations, loosen the srew fixing the dial board iss' y and take out the lam window from dial board ss'y. Next extend the lanp window tabs and separate the pilot lamp from the lanp window. When replacing the dial cali-

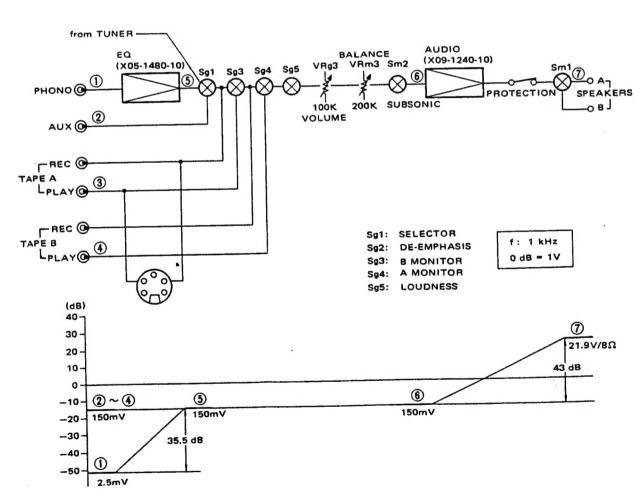
brations, rmove the dial board ass'y and the lamp window. Next pull out the dial calibraions from dial board ass'ytov-ard right or left.





BLOCK AND LEVEL DIAGRAM







CIRCUIT DESCRIPTION

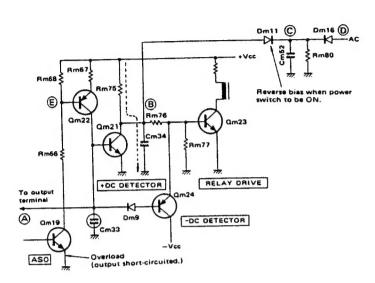


Fig. 1

Fig. 1 shows a protection circuit used in the KR-5030. This circuit operates for ASO, DC detection, and prevention of shock noise generated during ON-OFF operation of the POWER switch.

POWER-ON

When the POWER switch is turned on, charging current flows into Cm34 by the effect of +Vcc. Since Qm23 does not turn on unless Cm34 is completely charged and the base potential exceeds 0.6 volt, time constant of Cm34 and Rm75 is made to be more than the time necessary for circuit stabilization. Thus shock noise cannot appear at the output circuit.

POWER-OFF

When the POWER switch is turned off, voltage at point B quickly lowers to 0 volt and the base potential of Qm23 is reduced to turn off Qm23 itself. This causes the relay to release and generation of shock noise is prevented. While the power supply circuit is live, potential at point C is higher than that at point B. Namely, Dm11 is reverse bias. However, when the POWER switch is turned off, potential at point C immediately tends to lower to 0 volt due to discharge through Rm80. On the other hand Cm34 has a large static capacity and it is in the same power supply system as for the power amplifier. Therefore if there is no circuit of Dm11, etc., discharge time of Cm34 becomes longer and the relay cannot release immediately. Thus shock noise is generated.

ASO

When the output terminals are short-circuited, overcurrent flows into power transistors and ASO detection transistor Qm19 is turned on. The Qm19 turned on lowers base potential E of Qm22 which is thereby turned on. The Qm22 turned on causes Qm21 to turn on and it lowers potential at point B, thus turning off Qm23. This makes the relay released and the overload is reduced.

DC DETECTION

The relay is released when DC voltage appears at the output terminals. Thus the loadspeaker system can be protected. When positive (+) potential is generated at the output terminals, Qm21 is turned on to lower potential at point B and the relay is released. When negative (-) potential appears at the output terminals, Qm24 is turned on and -Vcc is applied to the base potential of Qm23. This causes Qm23 to turn off and the relay to be released.

AM-MUTING

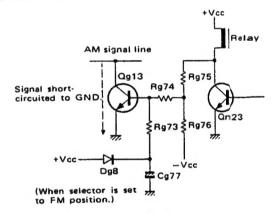


Fig. 2

Transistor Qg13 composes an AM muting circuit. When the SELECTOR switch is set in the FM (aid also MONO) position, +Vcc is applied to the anode of Eg8. Then voltage is applied to the base of Qq13 to turn it on. The AM signal is transferred to the GND circuit and the tuner output cannot be fed to the preamplifier. In the AM position, voltage to the base is applied from the -Vcc and Qg13 is turned off. The signal is then fed to the preamplifier. When the POWER switch is turned off while he SELECTOR switch is in the AM position, there may be si gnal leakage if a good timing with the relay function s mot secured. To avoid leakage the AM signal is transferred to the ground circuit simultaneously when the POWER switch is turned off. When the POWER switch is off, the rely driving transistor Qm23 is also off and the collector pgen tial is raised as a result. This potential is applied to the base of Qg13 through Ru75, and the AM signal is led to the ground circuit as described previously.



CIRCUIT DESCRIPTION

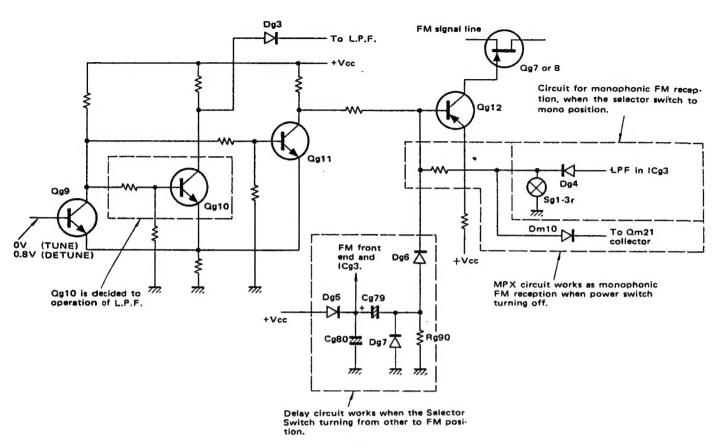


Fig. 3

Fig. 3 shows an FM muting circuit, which is controlled by No. 12 terminal voltage of IC HA1137W for IF. Voltage at No. 12 terminal is 0 volt during tuning and 0.8 volt during detuning.

TUNING

Qg9 is turned off during tuning and Qg10 and Qg11 are turned on at that time. When Qg10 is turned on, Dg3 is reverse bias and ICg3 works as stereo operation. Since Qg11 is turned on, Qg12 is also turned on to make Qg7 and Qg8 turn on. Thus the FM signal can be fed to the preamplifier.

DETUNING

Qg9 is turned on during detuning and both Qg10 and Qg11 are turned off at that time. When Qg10 is turned off, Dg3 is forward bias and the ICg3 does not work as stereo operation. Since Qg11 is turned off, Qg12 and also Qg7 and Qg8 are turned off and the signal cannot be fed to the preamplifier.

MONO operation takes place in the FM-MONO position since the 19 kHz pilot signal is forcedly led to the grounded circuit.

DELAY CIRCUIT

Switching over from AM to FM makes +Vcc pass through Dg5 and power is supplied to the FM front-end circuit. Since charging current flows into Cg79 at that time, Qg12 is turned off. When Cg79 has been charged up completely, Qg12 is controlled by collector voltage of Qg11 and switch Sg1-3r.

Capacitor Cg79 which has been charged up during FM mote then discharges and the delay circuit waits for switching over from AM to FM again.

When the POWER switch is turned off during FM steed reception, it takes much time until the relevant circuit stops functioning completely. This may make the FM stereo lamp left unlit even after the POWER switch has been turned off. Therefore, this lamp is unlit by the forced MONO circuit.



DESTINATIONS' PARTS LIST

Symbol # . New parts										
U.S.A. Canada (K)	Canada (P)		X D	Australia (X)	Europe (W)	Scandinavia (L)	England (T)	General Export (M)	Audio Club (KR-5330)	Description
A01-0328-02 A01-0328-02 A20-1223-03	A01.0328-02 - A20-1223-03	+	A01-0392-02 A03-0229-02 A20-1223-03	A01-0328-02 - A20-1223-03	A01-0328-02 - A20-1223-03	A01-0328-02 - A20-1223-03	A01-0328-02 - A20-1224-03	A01-0328-02 - A20-1223-03	A01-0329-02 A03-0229-02 A20-1225-03	Metal case to Cabinet to Penel ass'y to
842-0674-04	1		1	1	ı	ı	1	ı	1	UL passed sticker
	846-0055-2	0.	B46.0062.10 B46.0063.00	ı	1	1 5	B46-0060-00	1 030	B46-0062-10	Warranty card
B50-1685-00 B50-1687-00	850-1687-0	0	B50-1685-00 B58-0144-00	B50-1685-00 B58-0101-00	850-1685-00	B50-1685-00		B58-0101-00	B58-0101-00	Caution card (power voltage)
1	ı		B59-0018-00	ı	ı	ı	ı	ì	ı	Kenwood service stations' list.
1	1		D32-0075-04	D32-0075-04	D32-0075-04	ı	1	D32-0075-04	D32-0075-04	Switch stopper (power voitage)
	1		1	1	E04-0003-05	E04-0003-05	E04-0003-05	1	1.	DIN type coaxial connector *
	E08-0225	8 6	E08-0225-05	E08-0225-05	E08-0225-05	E30.0292.05	E30.0602.05	E08-0225-05	E08-0225-05	AC outlet X 2 AC power cord
E30-0181-05 E30-0181-05	E30-0181	ę	E30-0545-05	E30-0189-05	20-621-023	2000				
H01-1769-04 H01-1770-04	H01-177	10-04	H01-1773-14	H01-1769-04	H01-1769-04	H01-1769-04	H01-1771-04 H10-1505-02	H01-1769-04 H10-1505-02	H01-1772-14 H10-1505-02	Carton case & Polystyrens foamed fixture &
	H10-150	6-02	H10-1507-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1506-02	H10-1506-02	Polystyrene foamed fixture a
	H20-039	4-04	H20-0445-04	H20-0394-04	H20-0394-04	H20-0394-04	H20-0394-04	H20-0416-04	H20-0394-04	Protection cover
H21-0211-04 H21-0211-04	H21-021	1-04	1	H21-0211-04	H21-0211-04	HZ1-0211-04	-0-1120-12H			Anti-rust paper
1	ł		1	ı	ı	1				•
302-0092-05 302-0092-05	J02-0092	å S	J02-0049-14	302-0092-05	a 102-0092-05	302-0092-05	302-0092-05		302-0092-05	Foot X 4
	141-0034	-05	J41-0034-05	141-0024-15	J41-0033-05		J41-0024-15	J41-0034-05	J41-0033-05	Power cord bushing
1	ı		ı	1	1	J61-0038-05	1	1	ı	Cord band
L01-1441-05 L01-1441-05	L01-1441	-05	L01-1445-05	L01-1445-05	L01-1446-05	L01-1442-05	L01-1447-05	L01-1445-05	L01-1445-05	Power transformer #
N08-0125-05 N08-0125-05	N08-0125	-05	. 1	N08-0125-05	N08-0125-05	N08-0125-05	N08-0125-05	-80N	N08-0125-05	Dress screw X 4
1	1		N09-0290-05	I	1	ı	ı	1	ı	
			591.3001.05	831-2001-05	\$31-2001-05	S31-2001-05	ı	\$31-2001-05	\$31-2001-05	Slide switch
X00.1950-10 X00-1951-01	X00-195	1-01	X00-1950-81	X00-1950-81	X00-1950-61	X00-1950-51	X00-1950-51	X00-1950-81		10
	X05-148	01-0		X05-1480-81	X05-1480-61	X05-1480-61	X05-1480-61	X05-1480-81	X05-1480-81	
	X09-1240	-10		X09-1240-10	X09-1240-61	X09-1240-61	X09-1240-61	X09-1240-10	X09-1240-10	Audio PC board ass'y a

Symbol a : New parts



PARTS LIST

TOTAL

	Ref. No.	Parts No.	Description	Re- marks
Q1			SEMICONDUCTOR	
Q2		·		
Non-section Transistor 2SC2261(0), (Y) 2				l .
MISCELLANEOUS				4 -
MISCELLANEOUS				tr.
A30-0133-05 Back board	-			
B01-0114-03 B07-0224-04 B07-0224-04 B08-3013-05 B20-0412-05 B21-0017-04 B30-0137-05 B30-0143-05 B31-0262-05 B41-0230-04 B42-0009-04 B42-007-24 B42-0009-04 B42-007-24 B42-0009-04 B42-0473-24 B42-0009-04 B19-0182 B19			MISCELLANEOUS	L
B07-0224-04 B07-0225-04 B08-3013-05 B20-0412-05 B21-0017-04 B30-0137-05 B31-0262-05 B31-0262-05 B41-0230-04 B42-0099-04 B42-0073-24	_	A30-0133-05	Back board	ŵ
B07-0224-04 B07-0225-04 B08-3013-05 B20-0412-05 B21-0017-04 B30-0137-05 B31-0262-05 B31-0262-05 B41-0230-04 B42-0099-04 B42-0073-24	-	B01-0114-03	Dial escutcheon	
B07-0225-04 B08-3013-05 B20-0412-05 B21-0017-04 B30-0137-05 B30-0143-05 B31-0262-05 B41-0230-04 B42-0009-04 B42-0473-24 B42-0473-24 B19-0182 B20-0141-05 B31-0262-05 B31-0262-05 B41-0230-04 B42-0009-04 B42-0473-24 B31-0262-05 B3				1
B20-0412-05 B21-0017-04 B30-0137-05 Lamp X 2 (8V, 200mA)	-	1	-	•
B21-0017-04 B30-0137-05 B30-0137-05 B30-0143-05 B31-0262-05 B41-0230-04 B42-0009-04 B42-0073-24 Passed sticker X 2 Passed sticker X 3 Passed X 4 Passed	-	808-3013-05	Indication board	ŵ
B30-0137-05	-			•
B30-0143-05 Lamp (300mA, METER) Meter B41-0230-04 B42-0090-04 B42-0090-04 B42-0473-24 Serial number seal D15-0170-14 D15-0171-13 Dial pulley X 3 D15-0172-04 D19-0050-14 D20-0136-04 D32-0084-04 Switch stopper DE-EMPHASIS) D15-0172-04 D16-18 shaft D32-0084-04 Switch stopper DE-EMPHASIS) D15-0172-04 D16-18 shaft D32-0084-04 Switch stopper DE-EMPHASIS) D16-18 shaft D17-018 shaft D18-18 shaft	-			
B31-0262-05 B41-0230-04 B42-0009-04 B42-00473-24 Passed sticker Serial number seal	_			I
- B41-0230-04 B42-0009-04 B42-0009-04 B42-0473-24 - D15-0170-14 D15-0171-13 D15-0172-04 D19-0050-14 D20-0136-04 D32-0084-04 - E02-0202-05 E13-0415-05 B20-0811-05 - G01-0045-24 G01-0312-04 B32-0086-05 D19-0507-05 B33 for instruction manual - J19-0306-05 J19-0507-05 B33 for instruction manual - J21-1676-04 B34 for instruction manual - K21-0342-04 K23-0280-04 K23-0280-04 K23-0280-04 K27-0059-14 K10-0090-46 K21-0342-04	_	1		
- B42-0009-04 B42-0473-24 - D15-0170-14 - D15-0171-13 - D15-0172-04 - D19-0050-14 - D20-0136-04 - D32-0084-04 - D32-0084-04 - E02-020-05 - E13-0415-05 - E20-0811-05 - G01-0045-24 - G01-0312-04 - J19-0306-05 - J19-0507-05 - J21-1676-04 - J21-1676-04 - J61-0045-15 - J90-0086-03 - K21-0342-04 - K23-0280-04 - K23-0280-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 -				
- D15-0170-14 - D15-0171-13 - D15-0172-04 - D19-0050-14 - D20-0136-04 - D32-0084-04 - E02-0202-05 - E13-0415-05 - E20-0811-05 - E20-0811-05 - G01-0045-24 - G01-0312-04 - M25-0078-00 - Bag for instruction manual - J19-0306-05 - J19-0507-05 - J21-1676-04 - Heat sink mounting resin - Combex X 12 - Dial pointer rail - K21-0342-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 - N14-0115-05 - M bar antenna	_			
- D15-0171-13 - D15-0172-04 - D19-0050-14 - D20-0136-04 - D32-0084-04 - E02-0202-05 - E13-0415-05 - E20-0811-05 - E20-0811-05 - D1al spring (pulley) - G01-0045-24 - G01-0312-04 - D1al spring (pulley) - Spring X 4 - H25-0078-00 - Bag for instruction manual - J19-0306-05 - J19-0507-05 - J21-1676-04 - J21-1676-04 - J61-0045-15 - J90-0086-03 - K21-0342-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 - N10-2090-46 - N14-0115-05 - T90-0083-05 - AM bar antenna	-	842-0473-24		
- D15-0172-04 D19-0050-14 D20-0136-04 D32-0084-04 Dial shaft Switch stopper (DE-EMPHASIS)	_	D15-0170-14	Small pulley X 3	
- D19-0050-14 - D20-0136-04 - D32-0084-04 - D32-0084-04 - D32-0084-04 - Dial shaft Switch stopper (DE-EMPHASIS) - E13-0415-05 - E13-0415-05 - E20-0811-05 - SP terminal (8P) - G01-0045-24 - G01-0312-04 - H25-0078-00 - J19-0306-05 - J19-0507-05 - J21-1676-04 - J21-1676-04 - J21-1676-04 - J21-0342-04 - K21-0342-04 - K21-0342-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 - N14-0115-05 - Heat sink mounting resin - K21-0342-04 - K21-0342-	_	D15-0171-13	Dial pulley	1
- D20-0136-04 Dial shaft Switch stopper (DE-EMPHASIS) - E02-0202-05 E13-0415-05 E20-0811-05 SP terminal (8P) - G01-0045-24 G01-0312-04 Dial spring (pulley) Spring X 4 - H25-0078-00 Bag for instruction manual - J19-0306-05 Wire holder Antenna holder - J21-1676-04 Heat sink mounting resin - J61-0045-15 Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) Knob X 6 K27-0059-14 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 N10-2090-46 N10-2090-46 N10-2090-46 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_	D15-0172-04	Small pulley X 2	ά
- D32-0084-04 Switch stopper (DE-EMPHASIS) - E02-0202-05 E13-0415-05 E20-0811-05 SP terminal (8P) - G01-0045-24 Dial spring (pulley) Spring X 4 - H25-0078-00 Bag for instruction manual - J19-0306-05 Wire holder Antenna holder - J21-1676-04 Heat sink mounting resin - J61-0045-15 Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) K23-0280-04 K27-0059-14 Knob X 6 Knob X 6 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 N10-2090-46 N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	-			
- E02-0202-05 - E13-0415-05 - E20-0811-05 - E20-0811-05 - E20-0811-05 - G01-0045-24 - G01-0312-04 - H25-0078-00 - H25-0078-00 - J19-0306-05 - J19-0507-05 - J21-1676-04 - J61-0045-15 - J90-0086-03 - K21-0342-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 - N14-0115-05 - T90-0083-05 - AM bar antenna	-			1
- E13·0415·05 Phono jack (4P) SP terminal (8P) SP terminal (8P)	_	D32-0084-04	Switch stopper (DE-EMPHASIS)	*
- E20-0811-05 SP terminal (8P) - G01-0045-24 G01-0312-04 Dial spring (pulley) Spring X 4 - H25-0078-00 Bag for instruction manual - J19-0306-05 Wire holder - J19-0507-05 Antenna holder - J21-1676-04 Heat sink mounting resin - J61-0045-15 Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) K23-0280-04 K27-0059-14 Knob X 6 Knob X 6 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) Hex. nut X 2 (panel) Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_			
- G01-0045-24 G01-0312-04 Dial spring (pulley) Spring X 4 - H25-0078-00 Bag for instruction manual - J19-0306-05 Wire holder Antenna holder - J21-1676-04 Heat sink mounting resin - J61-0045-15 Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) K23-0280-04 K27-0059-14 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) Hex. nut X 2 (panel) Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_			
- GO1-0312-04 Spring X 4 - H25-0078-00 Bag for instruction manual - J19-0306-05 Wire holder - J19-0507-05 Antenna holder - Heat sink mounting resin - Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) - K23-0280-04 K27-0059-14 Knob X 6 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 N10-2090-46 N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna		220001100	0	İ
- H25-0078-00 Bag for instruction manual - J19-0306-05 - J19-0507-05 - J21-1676-04 - Heat sink mounting resin - Combex X 12 Dial pointer rail - K21-0342-04 - K23-0280-04 - K27-0059-14 - N10-2090-46 - N10-2090-46 - N14-0115-05 - T90-0083-05 - AM bar antenna	-	G01-0045-24	Dial spring (pulley)	
- J19-0306-05 - J19-0507-05 - J21-1676-04 - J21-1676-04 - J61-0045-15 - J90-0086-03 - K21-0342-04 - K23-0280-04 - K27-0059-14 - N09-0293-05 - N10-2090-46 - N14-0115-05 - T90-0083-05 - AM bar antenna	-	G01-0312-04	Spring X 4	
- J19-0507-05 Antenna holder - J21-1676-04 Heat sink mounting resin - J61-0045-15 Combex X 12 - J90-0086-03 Dial pointer rail - K21-0342-04 Knob (TUNING) - K23-0280-04 Knob X 6 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) - N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_	H25-0078-00	Bag for instruction manual	
- J21-1676-04 Heat sink mounting resin J61-0045-15 Combex X 12 Dial pointer rail K21-0342-04 Knob (TUNING) K23-0280-04 Knob X 6 Knob X 6 Knob X 4 (pushbutton) N09-0293-05 Screw X 5 (pulley) N10-2090-46 Hex. nut X 2 (panel) N14-0115-05 Flange nut X4 (power transformer) T90-0083-05 AM bar antenna	 	J19-0306-05	Wire holder	
- J61-0045-15 - J90-0086-03 Combex X 12 Dial pointer rail - K21-0342-04 Knob (TUNING) K23-0280-04 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) Hex. nut X 2 (panel) Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	-	J19-0507-05	Antenna holder	
- J61-0045-15 - J90-0086-03	-	J21-1676-04	Heat sink mounting resin	1
- J90-0086-03 Dial pointer rail - K21-0342-04 Knob (TUNING) - K23-0280-04 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) - N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	ł _	J61-0045-15	Combex X 12	Ú.
- K23-0280-04 Knob X 6 Knob X 4 (pushbutton) - N09-0293-05 Screw X 5 (pulley) - N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flenge nut X4 (power transformer) - T90-0083-05 AM bar antenna	_		Dial pointer rail	
- K27-0059-14 Knob X 4 (pushbutton) - N09-0293-05 Screw K 5 (pulley) - N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_	K21-0342-04	Knob (TUNING)	
- NO9-0293-05 Screw K 5 (pulley) - N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	-	K23-0280-04		
- N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4(power transformer) - T90-0083-05 AM bar antenna	-	K27-0059-14	Knob X 4 (pushbutton)	
- N10-2090-46 Hex. nut X 2 (panel) - N14-0115-05 Flange nut X4(power transformer) - T90-0083-05 AM bar antenna	l _	N09-0293-05	Screw X 5 (pulley)	1
- N 14-0115-05 Flange nut X4 (power transformer) - T90-0083-05 AM bar antenna	_			
	-	N 14-0115-05	Flange nut X4 (power transformer)	
T90-0202-05 FM indoor antenna	_	T90-0083-05	AM bar antenna	
	-	T90-0202-05	FM indoor antenna	
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POWER SUPPLY (X00-1950, 1951-)

Ref. No.	Parts No.	Description	Re- Marks			
	С	APACITOR				
Ck1	C91-0001-05	Ceramic 0.01µF AC125V				
	C90-0145-05	or film 0.01µF AC125V (X00-1950-10)				
	C91-0025-05	Film 0.01µF AC 125V (X00-1951-01)				
	C91-0023-05	Caramic 0.01µF AC 250V (X00-1950-81)				
	CK45E3D103PMU	Ceramic 0.01µF +100%,0% (X00-1950-61, -1951-71)				
	•	RESISTOR				
Rk1	RC05GF2H226M	Carbon 2.2MΩ ±20% 1/2W (X00-1950-10, -1951-01)				
MISCELLANEOUS						
Fk1	F05-5021-05	Fuse 5A (pri) (X00-1950-10, -1951-01)				
Fk1	F05-2528-05	Fuse 2.5A (pri) (X00-1951-71)				
Fk1, 2	F05-2521-05	Fuse 2.5A (pri) (X00-1950-81)				
Fk1, 2	F05-2528-05	Fuse 2.5A (pri) (X00-1950-61)				
Fk3	F05-1021-05	Fuse 1A (pilot) (X00-1950-10, -1951-01)				
Fk3	F05-1023-05	Fuse 1A (pilot) (X00-1950-81)				
Fk3	F06-1021-05	Fuse 1A (pilot) (X00-1950-61, -1951-71)				
-	J13-0055-05	Fuse clip X 4 (X00-1950-10, -1951-01, -71)				
_	J13-0055-05	Fuse clip X 6 (X00-1950-61, -81)				

TUNER (X05-1480-10, -61, -81)

Ref. No.	Parts No.	1	Descriptio	n	Re- marks
	C	APACITOR	١.		
Cg1	CC45SL1H101K	Ceramic	100pF	± 10%	
Cg2	CC45SL1H150K	Ceramic	15pF	±10%	1
Cg3	CK45F1H103Z	Ceramic	0.01µF	+80%,-20%	1
Cg4	CC45SL1H150K	Ceramic	15pF	± 10%	
Cg5	CC45SL1H100D	Ceramic	10pF	± 0.5pF	1
Cg6	CC45SL1H221K	Ceramic	220pF	± 10%	
Cg7, 8	CK45F1H103Z	Ceramic	0.01µF	+80%,-20%	1
Cg9	CC45LG1H220J	Ceremic	22pF	±5%	ł
· ·		Refer to f	vote of L	g4.	
Cg10	CC45SH1H080D	Ceramic	8pF	± 0.5pF	
Cg11	CC45CH1H390K	Ceramic	39pF	± 10%	
Cg12	CC45CH1H150K	Ceramic	15pF	± 10%	
Cg13	CK45F1H103Z	Ceramic	0.01µF	+80%,20%	
Cg14	C91-0037-05	Low capa	citive 0.4	7pF	
Cg15~19	CK45F1H103Z	Ceramic	0,01µF	+80%,-20%	
Cg20	CC45SL1H101K	Ceramic	-	-	ľ
Cg21	CK45F1H473Z	Ceramic	0.047µF	+80%,20%	
Cg22	CE04W1HR47	Electrolyt			
Co23.24	CK45F1H103Z	Ceramic	0.01µF	+80%,20%	
Cg25	CE04W1H010	Electrolyt	ic 1µF	50WV	
Cg26, 27	CK45F1H473Z	Ceramic		+80%20%	1
Cg28	CC45UJ1H180K	Ceramic	18pF		1
Cg29	CQ09FS1H361J	Polystyre			
Cg30	CC45SL1H470K	Ceramic	47pF	±10%	



PARTS LIST

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Cg31, 32 C90-0245-05	Ref. No.	Parts No.	Description	Re- marks
Cg33	Cg31, 32	C90-0245-05		
CQ33				
Cg35, 36 Cg90-0245-05 Cg37 CG93M1H473K CG38 CE04W1E100 CG39 CE04W1E100 CG39 CE04W1E100 CG40 CK45B1H102K Cg41, 42 Cg90-0245-05 CG40 CK45B1H102K Cg41, 42 CG90-0245-05 CG44 CG93M1H104M CG44 CG93M1H104M CG44 CG93M1H103J CE04W1C101 CG46 CG47, 48 CG04W1C101 CG46 CG93M1H473K CG47 CE04W1C21 CG947, 48 CG04W1C221 CG50 CG50 CG04W1H7010 CG65 CG04W1H7010 CG65 CG04W1H221 CG05 CG04W1H22 CG75 CG04W1H22 CG75 CG04W1H22 CG75 CG04W1H22 CG75 CG04W1H22 CG75 CG05 CG93M1H124KDA CG61 CG93M1H24KDA CG61 CG93M1H24KDA CG61 CG93M1H22AD Mylar CG05 CG05 CG93M1H124KDA Mylar C015µF 25WV CG63 CG09M1H124KDA Mylar C015µF 25WV CG63 CG04W1C310 CE04W1C310 CE04W1C310 CE04W1C310 CE04W1C330 CE04W1C30	Cg33	CK45B1H102K		
Cg37 CQ93M1H473K CE04W1E100 CE04W1H010 CE04W1H010 CK45B1H102K C90-0245-05 C093M1H104M Cy44 CQ93M1H104M CQ44 CQ93M1H104M CQ44 CQ93M1H104M CQ45 CE04W1C101 CQ46 CQ93M1H473K CE04W1E100 CE04W1E100 CE04W1H010 CE05W1H010 CQ93M1H124DA CQ93M1H124DA CQ93M1H124DA CQ93M1H124DA CQ93M1H272J CE04W1E100 CE04W1E101 CE04W1E100 CE04W1E101 CE04W1E1	_	CE04W1E100	Electron, no repri	I. I
Cg37 CO93M1H473K Mylar 0.047μF ± 10% Cg39 CE04WH1E100 Electrolytic 10μF 25WV Cg40 CK4581H102K Semiconductor ceramic 0.01μF ± 20% Cg41 42 C93M1H104M Mylar 0.01μF ± 20% Cg44 C93M1H103M Mylar 0.01μF ± 20% Cg44 C93M1H103J Mylar 0.01μF ± 5% Cg47 48 C604W1E100 Electrolytic 100μF ± 5% Cg50 C204M1H210 Electrolytic 100μF ± 5% Cg51 CE04AW1H72D Electrolytic 100μF ± 5WV Cg52 CE04AW1H72D Electrolytic 220μF 50WV Cg53 CE04AW1H221 Electrolytic 220μF 50WV Cg53 CE04W1E221 Electrolytic 220μF 50WV Cg55 C8 CC93M1H82J Mylar 0.015μF ± 5% Cg65 C6 CO93M1H24KDA Mylar 0.0	Cg35, 36	C90-0245-05		
CEO4WIHO10 Electrolytic 10µF 25WV Electrolytic 1µF 50WV CA45B1H102K C90-0245-05 C093M1H104M Mylar 0.1µF ±20% Mylar 0.1µF ±20% Mylar 0.1µF ±20% Mylar 0.01µF ±5% Electrolytic 100µF ±10% Electrolytic 100µF ±10% Electrolytic 100µF ±10% Electrolytic 100µF ±5% Electrolytic 100µF ±5% Electrolytic 20µF ±10% Electrolytic 20µF ±5% Electrolytic 0.47µF ±10% Electrolytic 0.47µF ±10% Electrolytic 0.47µF ±10% Electrolytic 0.22µF ±10% Electro			•	
CE04W1H010 CR45B1H102K C941, 42 C90-0245-05 Semiconductor ceramic C941, 42 C90-0245-05 Semiconductor ceramic C941, 42 C90-0245-05 Semiconductor ceramic C944 C093M1H103J Mylar C0.1µF ±20% C945 CE04W1C101 Electrolytic 100µF ±5% Electrolytic C00µF ±10W C946 C093M1H473K CE04W1C21 CE04W1C22 CE04W1C22 CE04W1C22 CE04W1H22J CE04W1H22M CE04W1H22M CE04W1H22M CE04W1E3D CE04W1E3D CE04W1E3D C955 - S8 C093M1H63J Mylar C0.15µF ±5% C956 C093M1H63J Mylar C0.15µF ±5% C959, 60 C093M1H124KDA Mylar C0.15µF ±5% C093M1H22J C093M1H22J C093M1H22J C093M1H22J C093M1H22J C093M1H22J C093M1H22J C093M1H22J C093M1H22D C003M1H22D C	_	1	,	
CR45B1H102K Cganic 1000pf ±10% Semiconductor ceramic 0.01µF ±20% Mylar 0.1µF ±5% Cga45 Ce04W1C101 Electrolytic 100µF ±6% Cga47 48 CE04W1E100 Electrolytic 100µF ±10% Cga51 Ce04W1C221 Electrolytic 220µF ±10% Cga51 Ce04W1H010 Electrolytic 220µF ±5% Cga51 Ce04W1H010 Electrolytic 0.47µF ±50WV Electrolytic 0.47µF ±50WV Electrolytic 0.47µF ±50WV Electrolytic 0.22µF ±50WV ±60H101 ±60				
Cg41, 42 Cg0-0245-05 Cg44 Cg33M1H104M Cg44 Cg3M1H103J Cg45 Cg46 Cg47, 48 Cg09M1H473K Cg50 Cg50 Cg50 Cg50 Cg50 Cg51 Cg51 Cg52 Cg51 Cg54 Cg54 Cg54 Cg54 Cg57 Cg55 Cg54 Cg56 Cg56 Cg56 Cg57 Cg56 Cg64 Cg3M1H104M Cg57 Cg57 Cg57 Cg57 Cg67, 68 CG3M1H104M Cg67, 72 Cg77 Cg71, 72 Cg737-76 Cg04W1E100 Cg77 Cg77 Cg04W1E100 Cg77 Cg04W1E100 Cg77 C	-			
CQ43				
C944 C093M1H103J C045 C046 C093M1H473K C046 C093M1H473K C047, 48 C047	C941, 42	C30-02-43-03		
C944 CQ93M1H103J CQ46 CQ94M1C101 Electrolytic 100µF ±5% CQ94M1C321 Electrolytic 100µF ±5% CQ50 CQ95SH152J CQ55 CQ95SH152J CQ55 CQ94M1H010 Electrolytic 0.47µF 50WV 50%	Ca43	CQ93M1H104M	Mylar 0.1µF ±20%	
CQ46 CQ93M1H473K CQ47, 48 CE04W1E100 Electrolytic 220µF 25WV Electrolytic 220µF 50WV Electrolytic 220µF 25WV Electrolytic 270µF 25WV Electrolyt			Mylar 0.01μF ±5%	
CG47, 48 CE04WIE100 CE04W1C221 CE05W CE04W1C221 CE04AW1HR47M CG51 CE04AW1HR47M CG52 CE04AW1HR47M CE05W1C251 CE04AW1HR22M CE04AW1HR22M CE04AW1H221 CE05W1C25 CE04W1H010 CE04W1E221 CE05W1C25 CE03W1H153J CE05W1H124KDA CG61, 62 CQ93M1H153J CQ65, 66 CQ93M1H153J CQ65, 66 CQ92M1H124KDA CG67, 68 CK4581H681K CG67, 72 CE04W1E101 CE04W1E101 CE04W1E100 CE04W1E100 CE04W1E100 CE04W1E100 CE04W1E100 CE04W1C470 CE04W1C470 CE04W1C470 CE04W1C470 CE04W1C470 CE04W1C410 CE06W1C470 CE04W1C410 CE06W1C470 CE04W1C410 CE06W1C470 CE04W1C410 CE06W1C470 CE04W1C410 CE06W1C470	Cg45	CE04W1C101	Electrolytic 100µF 16WV	
Cg49 CE04W1C221 Cg50 CC09FS1H152J Cg51 CE04AW1HR47M Cg52 CE04AW1HR42M Cg52 CE04WHO10 Cg54 CE04W1E221 Cg55~58 CQ93M1H682J Cg61, 62 CQ93M1H124KDA Cg63, 64 CQ93M1H22J Cg63, 66 CQ92M1H124KDA Cg67, 68 CC458L1H22IK Cg77 CE04W1A470 Cg77 CE04W1C330 CE04W1C30 CE0	Cg46	CQ93M1H473K		
Cg50 CO09FS1H162J Polystyrene 1500pF ±5% Cg51 CE04AW1HR47M Electrolytic 0.47µF 50WV Cg52 CE04AW1HR42M Electrolytic 0.24µF 50WV Cg53 CE04W1E221 Electrolytic 220µF 50WV Cg55~60 CQ93M1H153J Mylar 6800pF ±5% Cg61, 62 CQ92M1H124KDA Mylar 0.015µF ±5% Cg63, 64 CQ93M1H822J Mylar 8200pF ±5% Cg67, 68 CX45B1H681K CG970 CE04W1A470 Electrolytic 10µF ±5% Cg69, 70 CE04W1C470 Electrolytic 10µF ±5% Cg77 CE04W1C330 Electrolytic 10µF ±5W Cg77 CE04W1C330 Electrolytic 10µF ±5W Cg79 CE04W1C470 Electrolytic 10µF ±5W Cg81 CE04W1C470 Electrolytic 10µF ±5W Cg81 CE04W1C470 Electrolytic 10µF	Cg47, 48	CE04W1E100		
Cg51	Cg49	CE04W1C221		
Cg52 CE04AW1HR22M Cg53 CE04W1HO10 Cg55~58 CQ93M1H682J Cg55, 60 CQ93M1H124KDA Cg63, 64 CQ93M1H224D Cg66, 66 CQ92M1H124KDA Cg67, 68 CK45B1H681K Cg69, 70 CE04W1A470 Cg71, 72 CQ93M1H272J Cg73~76 CE04W1E100 Cg78 CE04W1E100 CE04W1E101 CE05B; 86 CC15E1H470K CG83, 84 CC45SL1H470K CG83, 84 CC45SL1H420K CG93, 90 CC45SL1H101K CG93, 94 CQ93M1H103J CQ93, 94 CQ93M1H103J CQ93, 90 CC45SL1H220K CG93, 96 CQ93M1H272J CG99, 90 CC45SL1H220K CG99, 90 CC45SL1H20M CG90,	Cg50			
Cg53 CE04W1H010 Cg54 CE04W1E221 Cg55~68 CQ93M1H682J Cg69, 60 CQ93M1H153J Cg61, 62 CQ92M1H124KDA Cg63, 64 CQ93M1H822J Cg66, 66 CQ92M1H124KDA Cg67, 68 CK45B1H681K Cg69, 70 CE04W1E210 Cg71, 72 CQ93M1H272J Cg71, 72 CC93M1H272J Cg73~76 CE04W1E100 Cg73 CE04W1E100 Cg79 CE04W1C470 Cg79 CE04W1C470 Cg80 CG80 CE04W1C470 Cg80 CE04W1C470 Cg81 CE04W1C470 Cg81 CE04W1C470 Cg83, 84 CC45SL1H470K Cg83, 84 CC45SL1H470K Cg83, 90 CC45SL1H101K Cg93, 94 CQ93M1H272J CQ93M1H272J CQ93M1H272J CG98, 96 CC45SL1H101K CG91, 92 CC45SL1H20K CG99, 98 CC093M1H103J CG97, 98 CC093M1H103J CG97, 98 CC093M1H103J CG97, 98 CC993M1H103J CG97, 98 CC993M1H103J CG9106 CC45SL1H221K CG9106 CC45SL1H221K CG9107~109 CK45F1H473Z CG700 CG700 CC45SL1H221K CG700 CG700 CC45SL1H221K CG700 CG700 CC45SL1H221K CG700 CC700	-			
Cg54 CE04W1E221 Cg55-58 CQ93M1H682J Cg61, 62 CQ92M1H124KDA Cg63, 64 CQ93M1H822J Cg65, 66 CQ92M1H124KDA Cg67, 68 CK4581H681K Cg69, 70 CG77 CE04W1E100 Cg77 CE04W1E100 Cg78 CE04W1E100 Cg78 CE04W1E100 Cg78 CE04W1E100 Cg79 CE04W1C470 Cg79 CE04W1C470 Cg80 CG80, 70 CE04W1C470 Cg78 CE04W1C470 Cg80 CC64SL1H470K Cg83, 84 CC45SL1H470K Cg83, 84 CC45SL1H470K Cg87, 88 CC45SL1H101K Cg97, 92 CC45SL1H101K Cg91, 92 CC45SL1H101K Cg93, 94 CQ93M1H172J Mylar CR99, 90 CC45SL1H20K Ceramic C20pF 10% Cg93, 94 CQ93M1H173J Cg95, 96 CQ93M1H173J Cg97, 98 CC04SSL1H20K Ceramic C20pF 10% Cg98, 100 CK4561H471K Cg910,104 Cg105 CK4561H471X Cg105 CK4561H473Z CReramic C20pF 10% CRera				
Cg55~58 CQ93M1H682J Mylar 6800pF ± 5% Cg59, 60 CQ93M1H163J Mylar 0.015μF ± 5% Cg61, 62 CQ93M1H124KDA Mylar 0.12μF ± 10% Cg63, 64 CQ93M1H124KDA Mylar 0.12μF ± 10% Cg67, 68 CK4581H681K Ceramic 680pF ± 5% Cg69, 70 CE04W1A470 Electrolytic 10W Cg71, 72 CQ93M1H272J Mylar 2700pF ± 5% Cg77 CE04W1C330 Electrolytic 10μF 25WV Cg78 CE04W1C470 Electrolytic 10μF 25WV Cg81 CE04W1C470 Electrolytic 10μF 25WV Cg81 CE04W1E101 Electrolytic 47μF 16WV Cg81 CS15E1A3R3M Tantalum 33μF 16WV Cg87, 98 CC45SL1H401K Ceramic 47μF 10WV Cg93, 96 CQ93M1H703J Kylar 200pF ± 5% Cg95, 96 CQ93M1H7				
Cg59, 60 CQ93M1H153J				1
Cg61, 62 CQ93M1H124KDA Mylar 0.12μF ± 10% Cg63, 64 CQ93M1H822J Mylar 8200pF ± 5% Cg63, 64 CQ93M1H822J Mylar 8200pF ± 5% Cg67, 68 CC458B1H681K Ceramic 680pF ± 10% Cg69, 70 CE04W1A470 Electrolytic 47μF 10WV Cg71 C2 Q3M1H272J Mylar 2700pF ± 5% Cg77 CE04W1C330 Electrolytic 10μF 25WV Cg78 CE04W1C470 Electrolytic 10μF 25WV Cg79 CE04W1C470 Electrolytic 33μF 16WV Cg81 CE04W1E101 Electrolytic 47μF 16WV Cg81 CE04W1E101 Electrolytic 100μF 25WV Cg82 CS15E1A3R3M Tantalum 3.3μF 10WV Cg83, 84 CC45SL1H420K Ceramic 22pF ± 10% Cg93, 94 CQ93M1H772 Mylar 201pF ± 5% Cg95, 96				
Cg63, 64 CQ93M1H822J Cg65, 66 CQ92M1H124KDA Cg67, 68 CK45B1H681K Cg69, 70 CE04W1A470 Cg71, 72 CQ93M1H272J CG73~76 CE04W1E100 Cg77 CE04W1E100 Cg78 CE04W1C330 CE04W1C310 CE04W1C30 CE04W1C30 CE04W1C30 CE04W1C30 CE04W1C30 CE04W1C30 CE04W1C30 CE				
Cg65, 66 CQ92M1H124KDA Mylar 0.12μF ± 10% Cg67, 68 CK4581H681K Ceramic 680pF ± 10% Cg67, 68 CK4581H681K Ceramic 680pF ± 10% Cg67, 72 CC93M1H272J Mylar 2700pF ± 5% Cg77 CE04W1C330 Electrolytic 30μF 16WV Cg79 CE04W1C470 Electrolytic 30μF 16WV Cg80 CE04W1C330 Electrolytic 33μF 16WV Cg81 CE04W1C330 Electrolytic 100μF 25WV Cg81 CE04W1C330 Electrolytic 100μF 25WV Cg81 CE04W1C330 Electrolytic 100μF 25WV Cg81 CE04W1C470 Electrolytic 100μF 25WV Cg83 84 CC45SL1H470K Ceramic 22pF ± 10% Cg87, 88 CE04W1A470 Electrolytic 22pF ± 10% Cg93, 94 CC45SL1H220K Ceramic 22pF ± 10% <				
Cg67, 68 CK45B1H681K Ceramic 680pF ± 10% Cg69, 70 CE04W1A470 Electrolytic 47μF 10WV Cg71, 72 CE04W1E100 Electrolytic 10μF 25WV Cg73 CE04W1E100 Electrolytic 10μF 25WV Cg78 CE04W1C470 Electrolytic 10μF 25WV Cg79 CE04W1C470 Electrolytic 10μF 25WV Cg80 CE04W1C330 Electrolytic 10μF 25WV Cg81 CE04W1C330 Electrolytic 33μF 16WV Cg82 CE04W1C330 Electrolytic 100μF 25WV Cg81 CE04W1C470 Electrolytic 100μF 25WV Cg83 CC45SL1H470K Ceramic 47pF ± 10% Cg85, 86 CS15E1A3R3M Tantalum 3.3μF 10WV Cg87, 98 CC45SL1H101K Ceramic 22pF ± 10% Cg93, 94 CQ33M1H272J Mylar 2700pF ± 5% Cg97, 98 CE04AW1A47N Electrolytic 47μF 50WV Cg910 CK45E1H473Z Ceramic 470pF ± 10%				
Cg69, 70 Cg71, 72 Cg73M1H272J Cg73~76 CE04W1E100 Cg77 CE04W1E100 Cg78 CE04W1E100 Cg79 CE04W1C300 CE04W1C30 CE04W1C30 CE04W1C30 CE04W1C310 CE04W1C470 CE04W1C47 CE04W1C4				
Cg71, 72 CQ93M1H272J Mylar 2700pF ±5% Cg73~76 CE04W1E100 Electrolytic 10µF 25WV Cg77 CE04W1E100 Electrolytic 10µF 25WV Cg79 CE04W1C330 Electrolytic 10µF 26WV Cg80 CE04W1C330 Electrolytic 10µF 25WV Cg81 CE04W1A101 Electrolytic 10µF 25WV Cg83, 84 CC45SL1H470K Ceramic 47pF ±10% Cg87, 88 CE04W1A470 Electrolytic 10µF ±5% Cg87, 89 CC45SL1H420K Ceramic 47pF ±10% Cg93, 94 CQ93M1H272J Mylar 2700pF ±5% Cg97, 98 CQ93M1H272J Mylar 2700pF ±5% Cg99, 100 CK45B1H471K Ceramic 22pF ±10% Cg105 CK45F1H473Z Ceramic 4.7µF 50WV Cg106 CK45F1H473Z Ceramic 20pF ±10% Rg31, 72			Electrolytic 47µF 10WV	
Cg73~76 CE04W1E100 Electrolytic 10μF 25WV Cg77 CE04W1C330 Electrolytic 33μF 16WV Cg78 CE04W1C470 Electrolytic 10μF 25WV Cg80 CE04W1C470 Electrolytic 47μF 16WV Cg81 CE04W1C330 Electrolytic 33μF 16WV Cg82 CE04W1A101 Electrolytic 100μF 25WV Cg83 84 CC45SL1H470K Ceramic 47pF ± 10% Cg85 86 CS15E1A3R3M Tantalum 3.3μF 10WV Cg87 88 CE04W1A470 Electrolytic 47μF 10WV Cg87 89 CC45SL1H220K Ceramic 20pF ± 10% Cg97 92 CC45SL1H220K Ceramic 22pF ± 10% Cg93 94 CQ93M1H473Z Mylar 2700pF ± 5% Cg97 98 CE04AW1H4R7MC Ceramic 47pF ± 0% Cg99 100 CK45F1H473Z Ceramic 47pF ± 0% Cg103.104 CE04W1E101 Ceramic 47pF ± 0% <t< td=""><td>_</td><td></td><td></td><td>1</td></t<>	_			1
C977 CE04W1C330 Electrolytic 33μF 16WV C978 CE04W1E100 Electrolytic 10μF 25WV C979 CE04W1C470 Electrolytic 33μF 16WV C980 CE04W1C330 Electrolytic 33μF 16WV C981 CE04W1E101 Electrolytic 100μF 25WV C982 CE04W1A101 Electrolytic 100μF 25WV C983 84 CC45SL1H470K Ceramic 47pF ±10% C987 88 CS15E1A3R3M Tantalum 3.3μF 10WV C987 88 CE04W1A470 Electrolytic 47μF ±10% C987 92 CC45SL1H220K Ceramic 22pF ±10% C993 94 CQ93M1H103J Mylar 2700pF ±5% C995 96 CQ93M1H103J Mylar 270pF ±10% C997 98 CE04AW1E101 Electrolytic 10μF ±5% C991 CK45F1H473Z			Electrolytic 10µF 25WV	
Cg78	, -		Electrolytic 33µF 16WV	
Cg80 CE04W1C330 Electrolytic 33μF 16WV Cg81 CE04W1E101 Electrolytic 100μF 25WV Cg82 CE04W1A101 Electrolytic 100μF 25WV Cg83, 84 CC45SL1H470K Ceramic 47pF ± 10% Cg87, 88 CE04W1A470 Electrolytic 47μF ± 10W Cg89, 90 CC45SL1H220K Ceramic 100pF ± 10% Cg93, 94 CQ93M1H272J Mylar 2700pF ± 5% Cg95, 96 CQ93M1H103J Mylar 2700pF ± 5% Cg97, 98 CE04AW1H4R7MCC Electrolytic 4.7μF 50WV Cg99, 100 CK45B1H471K Electrolytic 4.7μF 50WV Cg90, 100 CK45B1H473Z Ceramic 0.047μF ±80%,-20% Cg106 CK45F1H473Z Ceramic 20pF ± 10% Cg107~109 CK45F1H473Z Ceramic 20pF ± 10% Cg107~109 CK45F1H473Z Carbon 68Ω ± 5% 1/4			Electrolytic 10µF 25WV	
C981 CE04W1E101 Electrolytic 100μF 25WV Electrolytic 100μF 10WV C983, 84 CC45SL1H470K C985, 86 CS15E1A3R3M Tantalum 3.3μF 10WV C987, 88 CE04W1A470 Electrolytic 47μF 10WV C989, 90 CC45SL1H101K Ceramic 100pF ±10% C991, 92 CC45SL1H220K Ceramic 22pF ±10% C995, 96 CQ93M1H272J Mylar 2700pF ±5% Mylar 0.01μF ±5% C997, 98 CE04AW1A47MCC Electrolytic 4.7μF 50WV C999, 100 CK45B1H471K C9103,104 CE04W1E101 CE04W1E101 CE04W1E101 CC45SL1H221K Ceramic 0.047μF +80%,−20% C9106 CC45SL1H221K Ceramic 0.047μF +80%,−20% Ceramic	Cg79	CE04W1C470	Electrolytic 47µF 16WV	
Cg82	Cg80	CE04W1C330		1 1
C983, 84	Cg81	CE04W1E101		1 1
Cg85, 86	Cg82	CE04W1A101		
C987, 88	Cg83, 84	CC45SL1H470K		
Cg89, 90	Cg85, 86			1 1
Cg91, 92 CC45SL1H220K Cg93, 94 CQ93M1H272J Mylar 2700pF ±5% Mylar 2700pF ±5% Mylar 2700pF ±5% Mylar 0.01μF ±5% Cg97, 98 CE04AW1H4R7MCC Cg99, 100 CK45B1H471K Ceramic 470pF ±10% Cg105 CK45F1H473Z Ceramic 0.047μF ±80%,−20% Cg106 CC45SL1H221K Ceramic 220pF ±10% (X05-1480-61) Ceramic 0.047μF ±80%,−20% Ceramic 0.047μF ±80%,−20% Ceramic 0.047μF ±80%,−20% Ceramic 0.047μF ±80%,−20% Ceramic 0.047μF ±10% (X05-1480-61) Ceramic 0.047μF ±10% (X		1		
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Cg99, 100 CK45B1H471K Ceramic 470pF ±10% Electrolytic 100μF 25WV Ceramic 0.047μF +80%,−20% CK45F1H473Z Ceramic 0.047μF +80%,−20% CG106 CC45SL1H221K Ceramic 220pF ±10% (X05-1480-61) Ceramic 0.047μF +80%,−20% CERAMIC 0.047μF +				,
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Cg106 CC45SL1H221K Ceramic 220pF ±10% (X05-1480-61) Cg107~109 CK45F1H473Z Ceramic 0.047μF +80%,−20% RESISTOR Rg8,12,18 RD14GY2E101J Carbon 100Ω ±5% 1/4W Carbon 68Ω ±5% 1/4W Carbon 330Ω ±5% 1/4W Carbon 330Ω ±5% 1/4W Carbon 10MΩ ±20%1/2W Carbon 10MΩ ±20%1/2W Carbon 100Ω ±5% 1/4W Carbon	1 -			
Cg107~109 CK45F1H473Z Ceramic 0.047μF +80%, -20%	-		1	
RESISTOR Rg8,12,18 RD14GY2E101J Carbon 100Ω ±5% 1/4W Rg40 RD14GY2E20J Carbon 68Ω ±5% 1/4W Rg43, 44 RD14GY2E680J Carbon 68Ω ±5% 1/4W Rg48 RD14GY2E331J Rg71, 72 RG121,122 RD14GY2E101J Carbon 100Ω ±5% 1/4W Carbon 100Ω ±	C9106	CC403L IM22.IK		
RESISTOR Rg8,12,18 RD14GY2E101J Carbon 100Ω ±5% 1/4W Rg39 RD14GY2E680J Carbon 68Ω ±5% 1/4W Carbon 330Ω ±5% 1/4W Carbon 330Ω ±5% 1/4W Carbon 10MΩ ±20%1/2W Carbon 10MΩ ±20%1/2W Carbon 100Ω ±5% 1/4W Carbon 100Ω	C0107~100	CK45F1H473Z	******	20%
Rg8,12,18	CA IONALOR			1
Rg8,12,18		DI DI	SISTOR	
Rg39		T	,	<u></u>
Rg40	_	I.		1
R943, 44 RD14GY2E680J R948 RD14GY2E331J Rc05GF2H106M RD14GY2E101J Carbon 330Ω ±5% 1/4W Carbon 10MΩ ±20%1/2W Carbon 100Ω ±5% 1/4W Carbon 25% 1/4W Carbon 25% 1/4W Carbon 25% 1/4W Carbon 330Ω ±5% 1/4W Carbon 100Ω ±5% 1/4W		1		
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Rg71, 72 RC05GF2H106M Carbon 10MΩ ±20%1/2W Carbon 100Ω ±5% 1/4W Carbon 100Ω ±20%1/2W Carbon 100Ω ±5% 1/4W Carbon		1		
Rg121,122 RD14GY2E101J Carbon 100Ω ±5% 1/4W SEMICONDUCTOR Qg1 V09-0124-10 FET 2SK61(GR), (Y) Qg2 V03-0104-05 Transistor 2SC535(A) Qg3 V03-0357-05 Transistor 2SC1342(B) Qg4 V03-1923-10 Transistor 2SC1923(R), (O)				1
SEMICONDUCTOR Og1 V09-0124-10 FET 2SK61(GR), (Y) Cg2 V03-0104-05 Transistor 2SC535(A) Cg3 V03-0357-05 Transistor 2SC1342(B) Cg4 V03-1923-10 Transistor 2SC1923(R), (O)	-		1	1
Og1 V09-0124-10 FET 2SK61(GR), (Y) Og2 V03-0104-05 Transistor 2SC535(A) Og3 V03-0357-05 Transistor 2SC1342(B) Og4 V03-1923-10 Transistor 2SC1923(R), (O)	1719121,124	1		
Og2 V03-0104-05 Transistor 2SC535(A) Og3 V03-0357-05 Transistor 2SC1342(B) Og4 V03-1923-10 Transistor 2SC1923(R), (O)		SEMIC	CONDUCTOR	
Og2 V03-0104-05 Transistor 2SC535(A) Og3 V03-0357-05 Transistor 2SC1342(B) Og4 V03-1923-10 Transistor 2SC1923(R), (O)	Qq1	V09-0124-10	FET 25K61(GR), (Y)	
Qg3 V03-0357-05 Transistor 2SC1342(B) Qg4 V03-1923-10 Transistor 2SC1923(R), (O)				1
Qg4 V03-1923-10 Transistor 2SC1923(R), (O)				
1			Transistor 2SC1923(R), (O)	1
		V03-1890-20	Transistor 2SC1890(E), (F)	

Ref. No.	Parts No.	Description	Re- marks
Qg7, 8	V09-0126-50	FET 2SK117(Y), (GR)	
	V09-0127-10	or 2SK105(F), (H)	÷
Qg9~11	V03-0270-05	Transistor 2SC945	
	V03-0504-05	or 2SC828A	
Qg12	V01-0084-05	Transistor 2SA733	
-		or 2SA564A	
Qg13	V03-0270-05	Transistor 2SC945	
	V03-0504-05	or 2SC828A	
ICg1	V30-0133-05	IC HA1137W	
ICg2	V30-0196-05	IC HA1197	
1092	V30-0245-10	or LA-1240	
10-2	V30-0244-10	IC LA3350S-L6	
ICg3			
ICg5, 6	V30-0264-10	IC HA1457	"
Dg1~8	V11-0271-05	Diode 1S2076	
	V11-0076-05	or 1S1555	
	D/	TENTIOMETER	
VRg1	R12-2016-05	Trimming 5kΩ (B) VCO	
VRg2	R12-1021-05	Trimming 1kΩ (B)SEPARATION]
VRg3	R06-5026-05	Potentiometer 100kΩ VOLUME	
		VC/TRIMMER	
-	C01-0185-05	Variable capacitor	
CTg1	C05-0055-05	Ceramic trimmer 6pF	
			<u> </u>
		SWITCH	
Sg1	S01-3023-05	Rotary switch SELECTOR	ά
Sg2	S31-2048-05	Slide switch DE-EMPHASIS	•
Sg3~5	S42-2019-05	Push switch TAPE, LOUDNESS	•
393 3			
	IFT/CO	L/INDUCTOR/FILTER	
Lg1	L31-0361-05	FM ANT coil	
Lg2	L31-0410-05	FM RF coil ,	*
Lg3	L40-1091-41	Inductor 1µH	1
Lg4	L32-0187-05	FM OSC coil	
1	FM OSC coil	Lg4 can match both parts No. L32-01	87-
1		0210-05. When using L32-0210-05	
		the capacitor Cg9 with parts No. CC	
	PG1H220J: 2	• • •	
	1 20 0200 05	FM IFT	
Lg5	L30-0282-05	1	1
Lg6	L40-2205-25	Inductor 22µH	1 .
Lg7	L30-0309-05	FM IFT	*
Lg8	L30-0310-05	FM IFT	*
Lg9	L40-2201-03	Inductor 22µH	1
Lg10	L40-1092-44	Inductor 1µH	1
Lg11	L32-0205-15	AM OSC coil	1
Lg12	L30-0284-05	AM detector coil	ļ
Lg13	L40-1021-03	Inductor 1 mH	
	L40-2292-44	Inductor 2.2µH	1
Lg14			1
	L40-2292-02	or 2.2μΗ (X05-1480-61)	1
	1 20 0000 00		
CFg1~3	L72-0052-05	FM ceramic filter	
CFg4	L72-0036-05	AM ceramic filter	
			1
	(MISCELLANEOUS	
_	B30-0084-05	Lamp X 5 8V 0.05A	T
-	E29-0088-05	Terminal board	
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PARTS LIST

AUDIO UNIT (X09-1240-10, -61)

☆: New parts

Ref. No.	Parts No.	Description Re-
	L. C.	APACITOR mark
Cm1, 2	CS15E1E2R2M	Tantalum 2.2µF 25WV
Cm3, 4	CS15E1ER22M	Tantalum 0,22μF 25WV
Cm5, 6	CC45SL1H150K	Ceramic 15pF ±10%
Cm7, 8	CE04BW1C470M	Electrolytic 47µF 16WV
Cm9, 10	CQ93M1H274K	Mylar 0.27µF ±10%
Cm11, 12	CE04AW1H010M	
Cm13, 14	CQ93M1H683K	Mylar 0.068µF ±10%
Cm15, 16	CQ93M1H274K	Mylar 0.27µF ±10%
Cm17, 18	CE04W1E100	Electrolytic 10µF 25WV
Cm19, 20	CE04W1A101	Electrolytic 100µF 10WV
Cm21, 22	CE04W1E100	Electrolytic 10µF 25WV
Cm24	CE04W1H331	Electrolytic 330µF 50WV
Cm25, 26	CQ93M1H104K	Myler 0.1µF ±10%
Cm27, 28	CE04W1H010	Electrolytic 1µF 50WV
Cm29, 30	CC45SL1H101K	Ceramic 100pF ±10%
Cm31, 32	CC45SL1H010D	Ceramic 1pf ±0.5pF
Cm33	CE04BW1A470M	Electrolytic 47µF 10WV
Cm34	C90-0349-05	Electrolytic 100µF 25WV
Cm35	CQ93M1H104K	Mylar 0.1µF ±10%
Cm37, 38	CC45SL1H100K	Ceramic 10pF ±10%
Cm45~48	C91-0039-05	Metalized polyester 0.1µF 250WV &
Cm49, 50	C90-0363-05	Electrolytic 10000µF 50WV 2
Cm51	CK45E2H103P	Ceramic 0.01µF +100%,-0%
Cm52	CE04W1H220	Electrolytic 22µF 50WV
Cm53	CE04W1H101	Electrolytic 100µF 50WV
Cm54	CK4581H561K	Ceramic 560pF ±10%
Cm55	CE04W1C221	Electrolytic 220µF 16WV
Cm56	CE04W1C101	
Cm57, 58	CE04W1V221	
Bm13 14	RD14GY2E151J	RESISTOR
Rm23~26	RD14GY2E271J	
8m27~30	R92-0167-05	
Rm31, 32	RS14GB3D4R7J	Cement 0.22Ω 3W Metal film 4.7Ω ±5% 2W
Rm33, 34	RC05GF2H100K	Carbon 10Ω ±10% 1/2W
Rm35, 36	RS14AB4A331J	Metal film 330Ω ±5% 1W
Rm62	RD14GY2E560J	Carbon 56Ω ±5% 1/4W
Rm71, 72	RC05GF2H561K	
Rm73	R\$14GB3D681J	Metal film 680Ω ±5% 2W
Rm81	RS14GB3D561J	Metal film 560Ω ±5% 2W
Rm82	RS14GB3D181J	Metal film 180Ω ±5% 2W
Rm83, 84	RC05GF2H122K	Carbon 1.2kΩ ±10% 1/2W
Rm86, 87	RS14GB3D821J	Metal film 820Ω ±5% 2W
	SEM	CONDUCTOR
Qm1~4	V01-0152-05	Transistor 2SA750(I)E
Qm5~8	V03-0481-05	Transistor 2SC1775A(E),(F)
Qm9, 10	V01-0200-05	Transistor 2SA872A(E), (F)
Qm11, 12	V04-0600-10	Transistor 2SD600K(E), (F)
	V03-0454-05	or 2SC1567A(Q), (R)
Qm13, 14	V02-0631-10	Transistor 2SB631K(E), (F) ☆
	V01-0175-05	or 2SA794A(Q), (R)
Qm19, 20	V03-1890-30	Transistor 2SC1890A(E), (F)
Qm21	V03-0270-05	Transistor 2SC945(Q), (R)
Qm22	V01-0084-05	Transistor 2SA733(Q), (R)
Qm23	V03-0452-05	Transistor 2SC1735E
Qm24	V01-0084-05	Transistor 2SA733(Q), (R)
Qm25	V03-0330-05	Transistor 2SC789
	V11-0271-05	Diode 1S2076
Dm1, 2		
	V11-0076-05	
	V11-0076-05	
Dm1, 2 Dm3, 4	V11-5100-40	Varistor STV-4HG
Dm1, 2	V11-5100-40 V11-0271-05	Varistor STV-4HG Diode 1S2076
Dm1, 2 Dm3, 4 Dm5, 6	V11-5100-40 V11-0271-05 V11-0076-05	Varistor STV-4HG Diode 1S2076 or 1S1555
Dm1, 2 Dm3, 4 Dm5, 6 Dm8	V11-5100-40 V11-0271-05 V11-0076-05 V11-0219-05	Varistor STV-4HG Diode 1S2076 or 1S1555 Diode V06B
Dm1, 2 Dm3, 4 Dm5, 6	V11-5100-40 V11-0271-05 V11-0076-05 V11-0219-05 V11-0271-05	Varistor STV-4HG Diode 1S2076 or 1S1555 Diode V06B Diode 1S2076
Dm1, 2 Dm3, 4 Dm5, 6 Dm8 Dm9, 10	V11-5100-40 V11-0271-05 V11-0076-05 V11-0219-05 V11-0271-05 V11-0076-05	Varistor STV-4HG Diode 1S2076 or 1S1555 Diode V06B Diode 1S2076 or 1S1555
Dm1, 2 Dm3, 4 Dm5, 6 Dm8 Dm9, 10 Dm11	V11-5100-40 V11-0271-05 V11-0076-05 V11-0219-05 V11-0271-05 V11-0076-05 V11-0273-05	Varistor STV-4HG Diode 1S2076 or 1S1555 Diode V06B Diode 1S2076 or 1S1555 Diode 1S2076A
Dm1, 2 Dm3, 4 Dm5, 6 Dm8	V11-5100-40 V11-0271-05 V11-0076-05 V11-0219-05 V11-0271-05 V11-0076-05	Varistor STV-4HG Diode 1S2076 or 1S1555 Diode V06B Diode 1S2076 or 1S1555

Note: When using 2SD600K as Qm11, 12, 2SB631K should be employed as Qm13, 14, also when using 2SC1567A as Qm11, 12 2SA794A should be done as Qm13, 14.

	as Qm11, 12 25A794A should be done as Qm13, 14.					
Ref. No.	Parts No.	Description	Re- marks			
Dm18	V11-0254-05	Zener diode YZ-140				
Dm19, 20	V11-0287-05	Zener diode WZ-240				
		POTENTIOMETER				
VRm1, 2	R12-0047-05	Trimming 500Ω(B) BIAS				
VRm3	R06-5030-05	Potentiometer 200kΩ (MN)	•			
		BALANCE				
VRm4	R06-2010-05	Potentiometer 5kΩ(C) X 2				
1		TREBLE				
VRm5	R06-2009-05	Potentiometer 5kΩ(C) X 2				
		BASS				
		COIL/INDUCTOR ·				
Lm1, 2	L39-0080-15	Phase compensator coil				
Lm3, 4	L40-1021-03	Ferri-inductor 1mH				
SWITCH/RELAY						
Sm1	S02-2004-05	Rotary switch				
1		POWER/SPEAKERS	÷			
ĺ		(X09-1240-10)				
[S02-2008-05	Rotary switch				
		POWER/SPEAKERS				
1		(X09-1240-61)				
Sm2	S40-2084-05	Phsu switch SUBSONIC	\$			
-	S51-4030-05	Relay PROTECTION				
	or					
\$51-4033-05						
	MISCELLANEOUS					
-	E11-0060-15	Phone jack				
_	J21-1677-03	Mounting hardware	à			

Note

Resistors except the special type (example: cement, metal litm, etc.) are not detailed in PARTS LIST. With regard to the value, refer to the schematic diagram or the PC board illustration. Resistors not detailed are carbon type (1/4W or 1/8W).

You should give an order for the carbon resistors according $\mathfrak b_{-}$ the ways described as follows:

A carbon resistor's part number is example RD14BY 2E 222J

1. Kinds of the carbon resistor

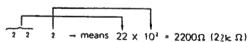




2. Wattage

1/4W → 2E 1/8W → 2B

3. Resistance value



Significant figure Multiplier

Example: $221 \rightarrow 220\Omega$ $222 \rightarrow 2.2k\Omega$ $223 \rightarrow 22k\Omega$

 $223 \rightarrow 22k\Omega$ $224 \rightarrow 220k\Omega$ $225 \rightarrow 2.2M\Omega$

4. Tolerance

J = ±5% (Gold cotor) K = ±10% (Silver cotor)



ADJUSTMENT

		TEST EQUIPMENTS		III COLITON	ADJUSTMENT	REMARKS	
NO.	ALIGN	CONNECTION	SETTING	SETTING	INDICATOR	POINTS	
FM	SECTION						
1		A and B	95 MHz (60 dB) 1 kHz (Mod) 75 kHz (Dev)	95 MHz	SSVM and scope to REC jack (L)	Lg5	Maximum deflection
2	1F			,	T meter	Lg7	Make the pointer posi- tion in the center of the meter
3		A and B	95 MHz (60 d8) 1 kHz (Mod) 75 kHz (Dev)	95 MHz	SSVM, scope and distortion meter to REC jack (L)	Lg8	Maximum deflection and minimum distortion
4	оитрит	- ditto -	95 MHz 1 kHz (Mod) 75 kHz (Dev) 60 dB	ditto	ditto		Confirm output voltage is 900 mV
5			90 MHz 1 kHz (Mod) 75 kHz (Dev)	90 MHz	- ditto -	Lg1, 2, 4	Maximum
6	TRACKING	ditto	105 MHz 1 kHz (Mod) 75 kHz (Dev)	105 MHz		CTg1 ~ 3	deflection
7	vco	A	95 MHz 0 (Dev) 60 dB (Input)	95 MHz	Freq. counter to TP1	VRg1	Counter indicates 19 kHz
8	SEPARATION	② and ④	95 MHz 1 kHz (Mod) 68.25 kHz (Dev) L or R (Select) 60 dB (Input)	ditto	SSVM, scope and distortion meter to REC jack (L)	VRg2	Minimum crosstalk (Maximum separation)
9	DISTORTION	(B) and (G)	95 MHz 1 kHz (Mod) 68.25 kHz (Dev) L (Select) 60 d8 (Input)	ditto	SSVM, scope and distortion meter to REC jack (L)	Lg5	Minimum distorion
AM	SECTION						
1	IF	(3) and (9)	1,000 kHz 400 Hz, 30% (Mod) 100 dB	1,000 kHz	SSVM and scope to REC jack (L)	CFg4	Maximum deflection
2			600 kHz 400 Hz, 30% (Mod) 100 dB	600 kHz	ditto	Lg11 Bar antenna	dito
3	TRACKING	- ditto-	1,400 kHz 400 Hz, 30% (Mod)	1,400 kHz	-01(0-	CTg4, 5	
AU	DIO SECTION				_		
1	BIAS			VOLUME is its min.	DC volt meter	VRm1, 2	Mete in⊲icates 15.5 m ✓ 😉

ABSOLUTE MAX. RATINGS

TRANSISTOR	ANSISTOR VCBO		VCEO	lc	PC	Tj	Tstg	fτ
2SA981	-120V	-6V	-120V	-8A	80W (Tc = 25°C)		-65 ~ +150°C	15 ~ 20 MHz
2SB631K	-120V	-5V	-120V	-1A	1W (Ta = 25°C) 8W (Tc = 25°C)	150°C	_55 ~ +150°(110 MHz
2SC2261	180V	6V	120∨	8A	80W (Tc = 25°C)	_	-65 ~ +150°(10 ~ 15 MHz
2SD600K	120V	5∨	120V	1A	1W (Ta = 25°C) 8W (Tc = 25°C)	150°C	-55 ~ +150°(130 MHz
FET	VGDO	lo.	Рт	Tj				
2SK105	-50V	20mA	250mW	125°C				



ADJUSTMENT

NOTE

- * RF-SG is set to the lowest response possible on oscillo-
- The output level of RF-SG is made a loss by the dummy antenna. The loss is different from the dummy antenna, so you should take into consideration the value of the loss applicable to your case.
- * Repeat TRACKING adjustment several times and confirm the reception of broadcasting.
- * Test point is shown in the schematic diagram.

TEST EQUIPMENTS AND ITS **SPECIFICATIONS**

AUDIO SIGNAL GENERATOR (AG)

Ranges:

5 Hz ~ 500 kHz

Waveform:

Sine wave 10V r.m.s.

Output: Distortion:

0.01% or less

SOLID STATE VOLT METER (SSVM)

Ranges:

0.3 mV ~ 100V (full scale)

Impedance:

Frequency response: 5 Hz ~ 500 kHz 1 M-ohms or more

STANDARD SIGNAL GENERATOR (RF-SG)

Ranges:

90 MHz ~ 108 MHz

150 kHz~ 1,500 kHz

Modulation frequency: 1 kHz, 400 Hz or external input

(input level: 2V or less)

Deviation:

 $0 \sim 150 \text{ kHz}$

Output:

100 mV or more 85 dB or more

S/N: Distortion (internal): 0.5% or less

OSCILLOSCOPE (SCOPE)

Ranges:

DC ~ 10 MHz

Sensitivity:

20 mV/cm

1 M-ohms or more

Impedance:

MULTIPLEX SIGNAL GENERATOR (MPX-SG)

Modulation frequency: 1 kHz or external input

(input level: 5V or less)

Separation:

60 dB or more

S/N: *

85 dB or more

FREQUENCY COUNTER (COUNTER)

Frequency response: 10 Hz ~ 1 MHz

Sensitivity:

50 mV or more 1 M-ohms or more

: Impedance:

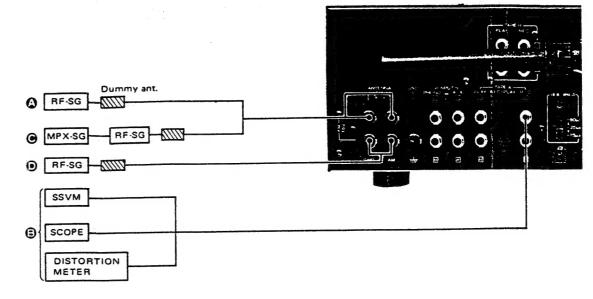
DISTORTION METER

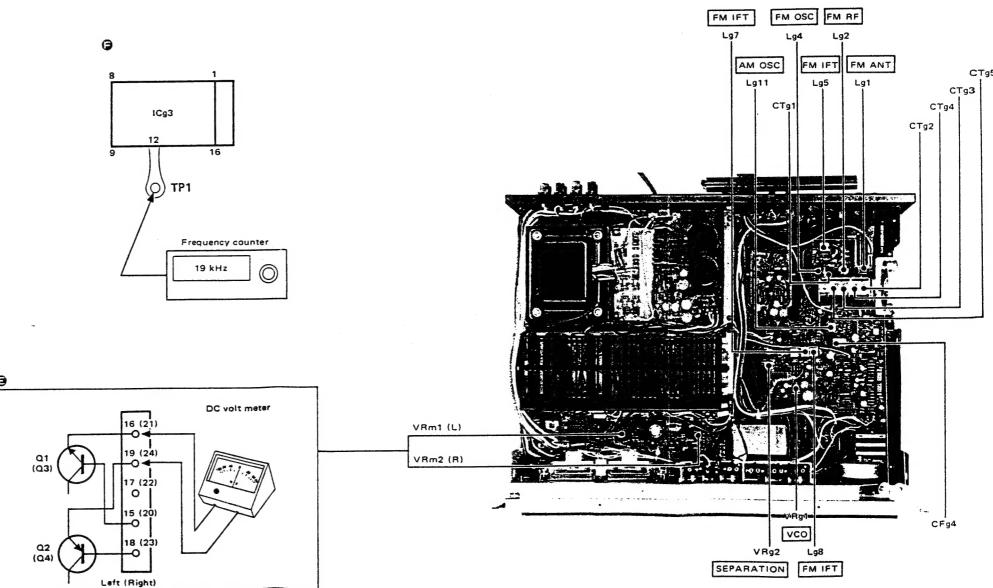
Ranges:

0.1% ~ 0.03% (full scale)

Sensitivity:

100 mV or more





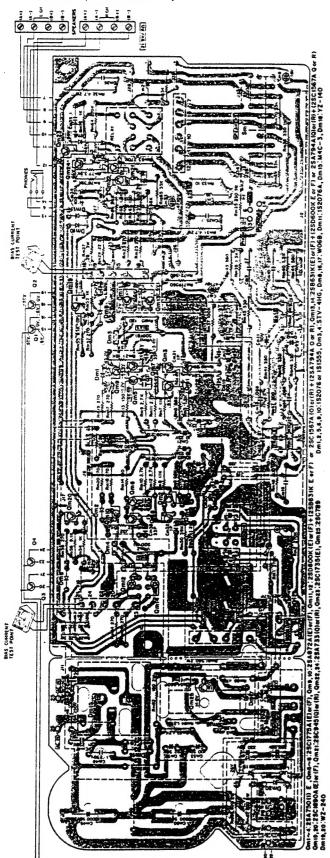




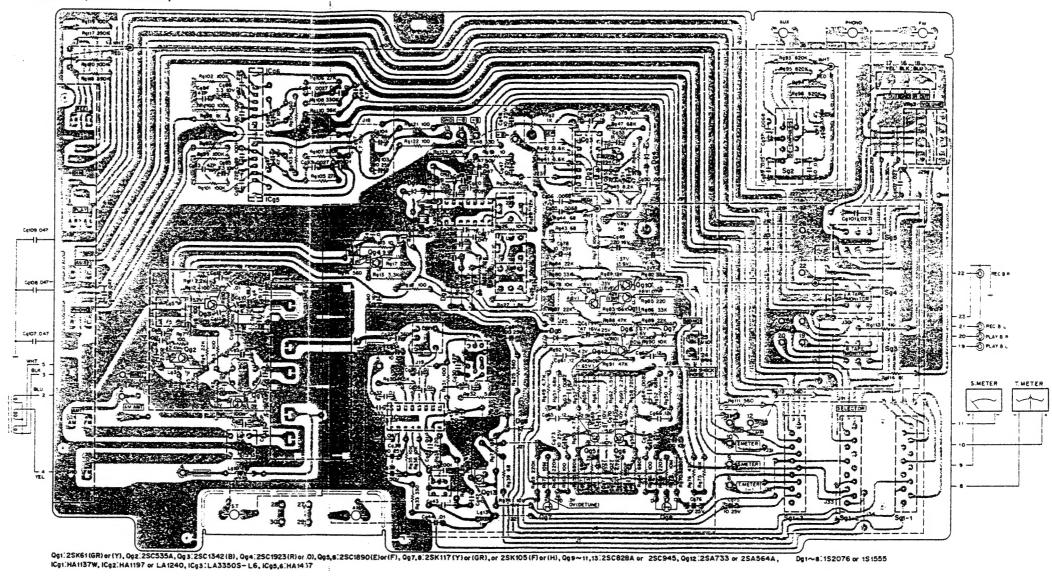
KR-5030 KR-5030

PC BOARD

▼ AUDIO (X09-1240-10)



▼ TUNER (X05-1480-10)



Semiconductor Name	Substitutions
2SA981	-
2SC2261	ļ -
TUNER (X05-1480-10)	
2SA733	2SA564A
2SC535A 2SC945	2SC535 (B) Check the oscillation: 2SC458, 2SC828A
2SC1342 (B)	2SC785 (R)
2SC1890 (E), (F)	25C1222 (U)
25C1923 (R), (O)	2SC381 (R), (Q)
25K61 (GR), (Y)	2SK105 (F), (H), 2SK68 (L), (M)
2SK117 (Y), (GR) HA1137W	23K 103 (F), (H), 25K68 (L), (M)
HA1197	LA1240
HA1457	-
LA-3350S-L6	-
AUDIO	ì
(X09-1240-10)	
2SA733 (Q), (R)	VCEO ≥ 40V 2SA620WL, 2SA640, 2SA810
2SA750 (I) (E) 2SA872A (E), (F)	25A750 (I), 25A893A
2SB631K (E), (F)	2SA794A (Q), (R)
2SC945 (Q), (R)	VCEO≥ 40V
2SC 789	2SD525, 2SD526
2SC1735 (E)	2SC1509 2SC1400, 2SC1890A
2SC1775A (E), (F) 2SC1890A (E), (F)	2SC1400, 2SC1775A
2SD600K (E), (F)	2SC1567A (Q), (R)



SCHEMATIC DIAGRAM

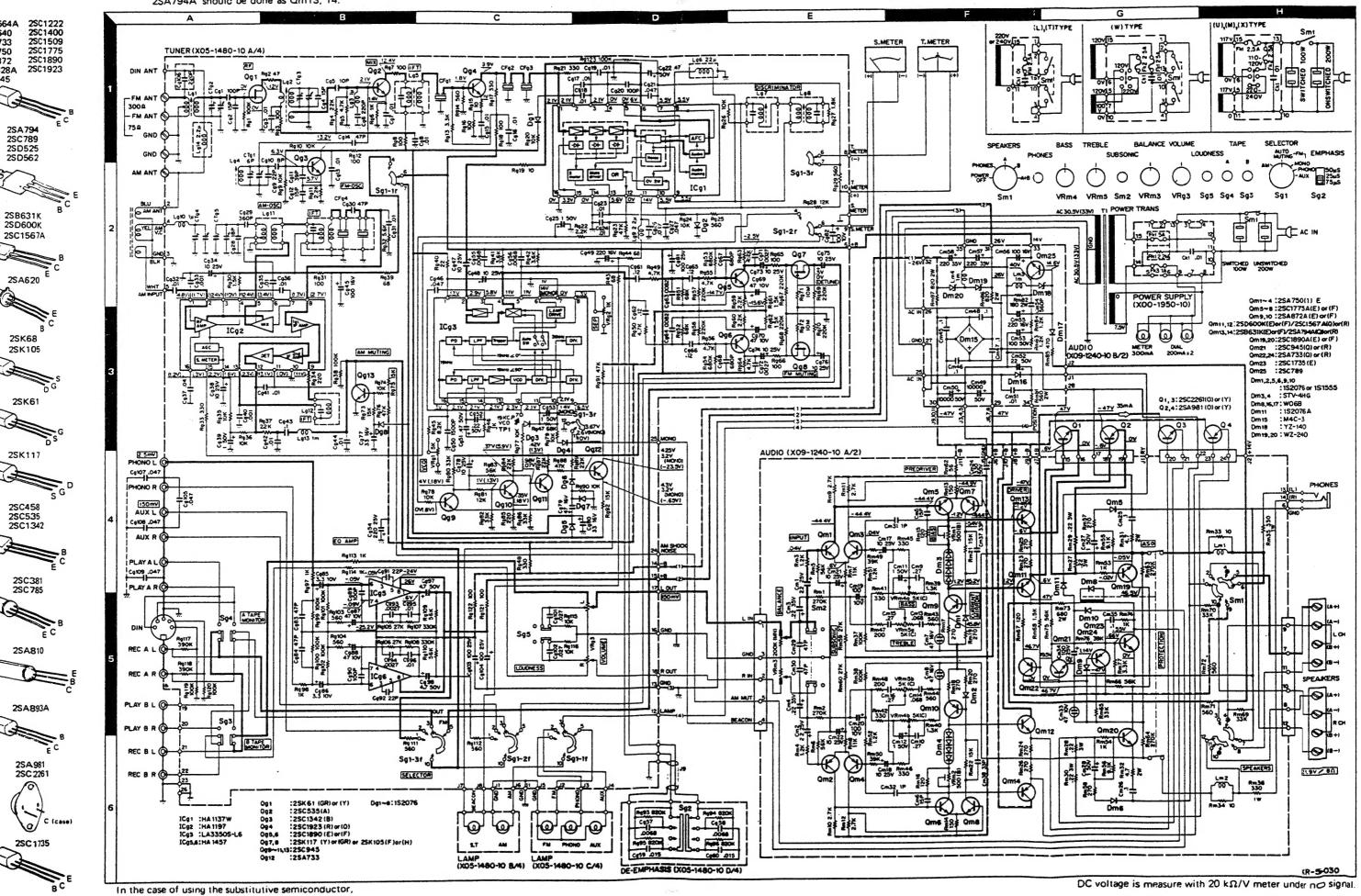
Note: When using 2SD600K as Qm11, 12, 2SB631K should be employed as Qm13, 14, also when using 2SC1567A as Qm11, 12, 2SA794A should be done as Qm13, 14.

you should confirm the lead of one.

2SA564A

2SA640 2SA733 2SA750 2SA872 2SC828A

2SC945







SPECIFICATIONS

AMPLIFIER SECTION

Power Output

60 watts* per channel, minimum RMS both channels driven, at 8 ohms from 20 to 20,000 Hz with no more than 0.1% total harmonic distortion.

Both Channels Driven	68 + 68W 8Ω at 1,000 Hz 80 + 80W 4Ω at 1,000 Hz
Dynamic Power Output	
Total Harmonic Distortion	
	0.05% at 1/2 rated power into 8Ω
Intermodulation Distortion	
(60 Hz: 7 kHz 4:1)	0.05% at 1/2 rated power into 8Ω
Power Bandwidth	10 Hz to 45,000 Hz
Damping Factor	30 at 8Ω
Speaker Impedance	Accept 4Ω to 16Ω
Input Sensitivity/Impedance/Si	gnal to Noise Ratio
(IHF A curve)	
Phono	2.5 mV/50kΩ/75 dB
AUX	
Tape	
Maximum Input Level	
for Phono	250 mV (RMS), T.H.D. 0.1%
	at 1.000 Hz
Output Level/Impedance	
Tape REC (Pin)	150 mV/1000
(DIN)	
	30 11147 00121
Phono	DIA A standard curve
Phono	
	+0.3, -0.3 dB
AUX and Tape	
	+0, -1.0 dB
Tone Control	
Bass	±8 dB at 100 Hz
Treble	±8 dB at 10 kHz
Subsonic Filter	15 Hz (6 dB/oct.)
Loudness Control	+9 dB at 100 Hz
(-30 dB)	

FM TUNER SECTION (IHF)

sable Sensitivity	10.8 dBf (1.9µV
OdB Quieting Sensitivit	y
Mono	15.0 dBf (3.0µV
Stereo	37.2 dBf (40µV)
ignal to Noise Ratio	
t 65 dBf	
Mono	73 dB
Stance	68 dB

Total Harmonic Distrotion	
at 65 dBf	
Mono	0.15%
Stereo	0.25%
Frequency Response	20 Hz to 15,000 Hz +0.5,
	- 2.0 dB
Capture Ratio	1.0 dB
Image Response Ratio	60 dB
Spurious Response Ratio	72 dB
IF Response Ratio	
(Balanced)	86 dB
Alternate Channel	
Selectivity	65 dB
AM Suppression Ratio	60 dB
Stereo Separation Ratio	45 dB at 1,000 Hz
	35 dB at 50 Hz to 15.000 Hz
Sub Carrier Product	
Ratio	40 dB
Antenna Impedance	300Ω balanced
	75 Ω unbalanced
FM Frequency Range	88 MHz to 108 MHz

AM SECTION

Usable Sensitivity	15µV
Signal to Noise Ratio	50 dB
Image Rejection	50 dB
Selectivity	33 dB

GENERAL

Power Consumption	450	W at full p	ower	
AC Outlet	Swi	tched 1,		
	Uns	witched 1		
Dimensions	W	18-29/3	32" (480	mm)
		< 19-7/8	(505	mm) >
	Н	5-7/8"	(149	mm)
		< 7-1/32	(179	mm)>
	D	15-15/	16" (405	mm)
		< 15-15/	16" (405	mm)>
Weight				
(Net)	2	6.5 lb (12	2 kb)	
	<3	0.9 lb (14	↓ kg)>	
(Gross)	3	0.9 lb (14	↓kg)	
	< 3	5.3 lb (16	i kg)>	
	<	> U.	S. Militar	ry Type
# Managered sussesses to Fad	1	Tondo C	:	'- T-

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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